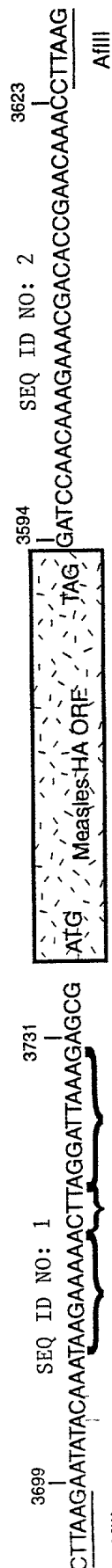
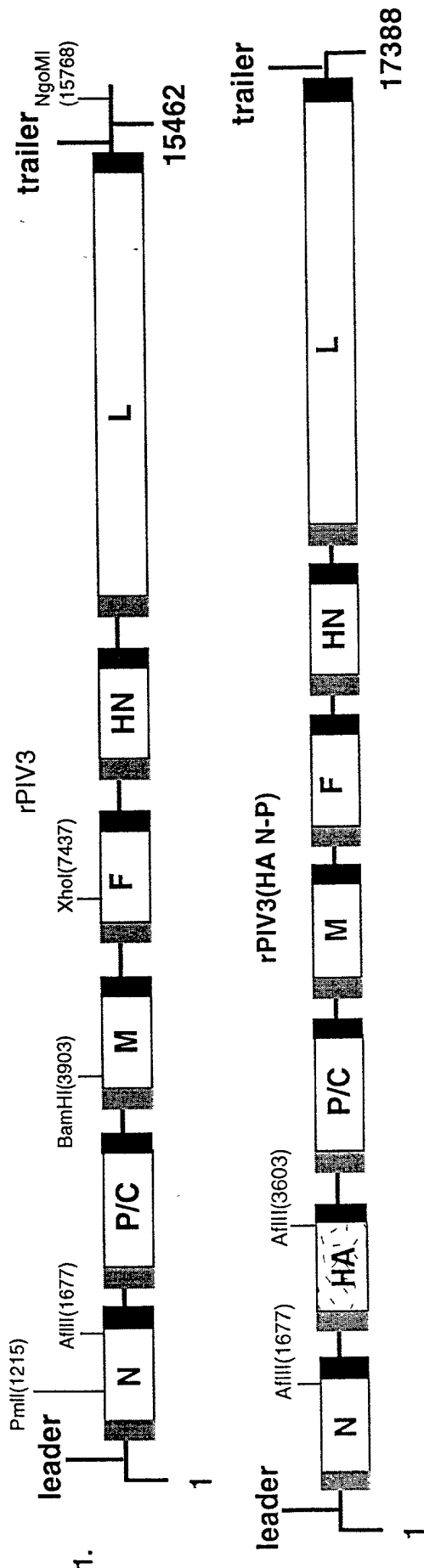


Measles HA insert for N-P and P-M junctions



N-P Junction



P-M Junction

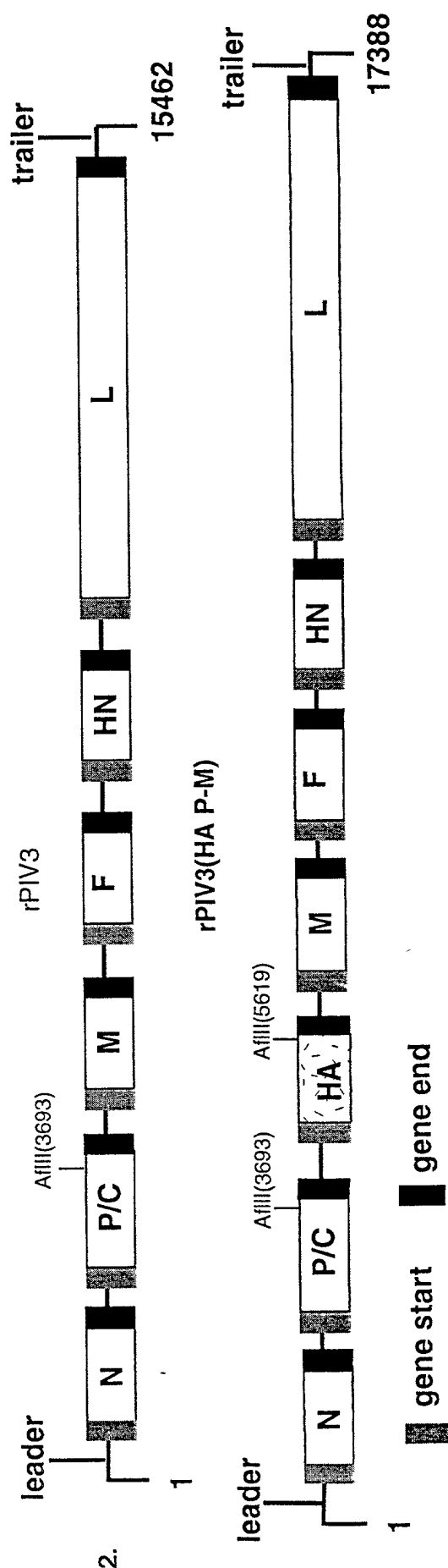


FIG. 1A

Measles HA Insert for the HN-L junction

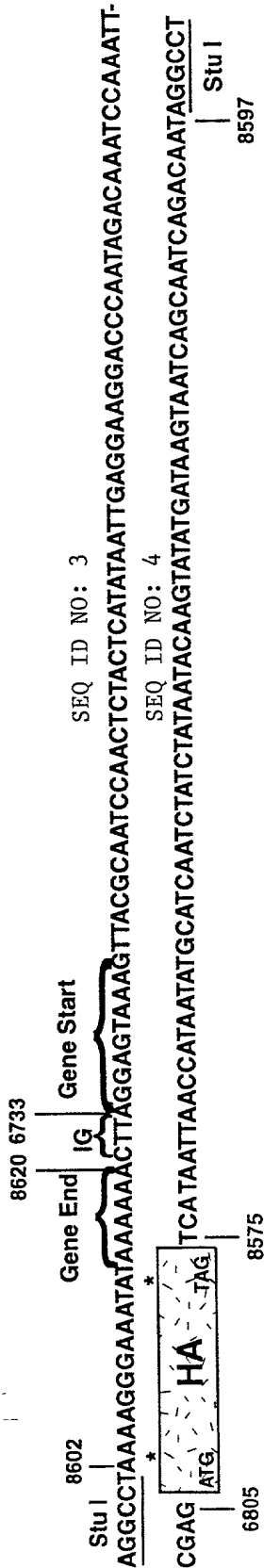
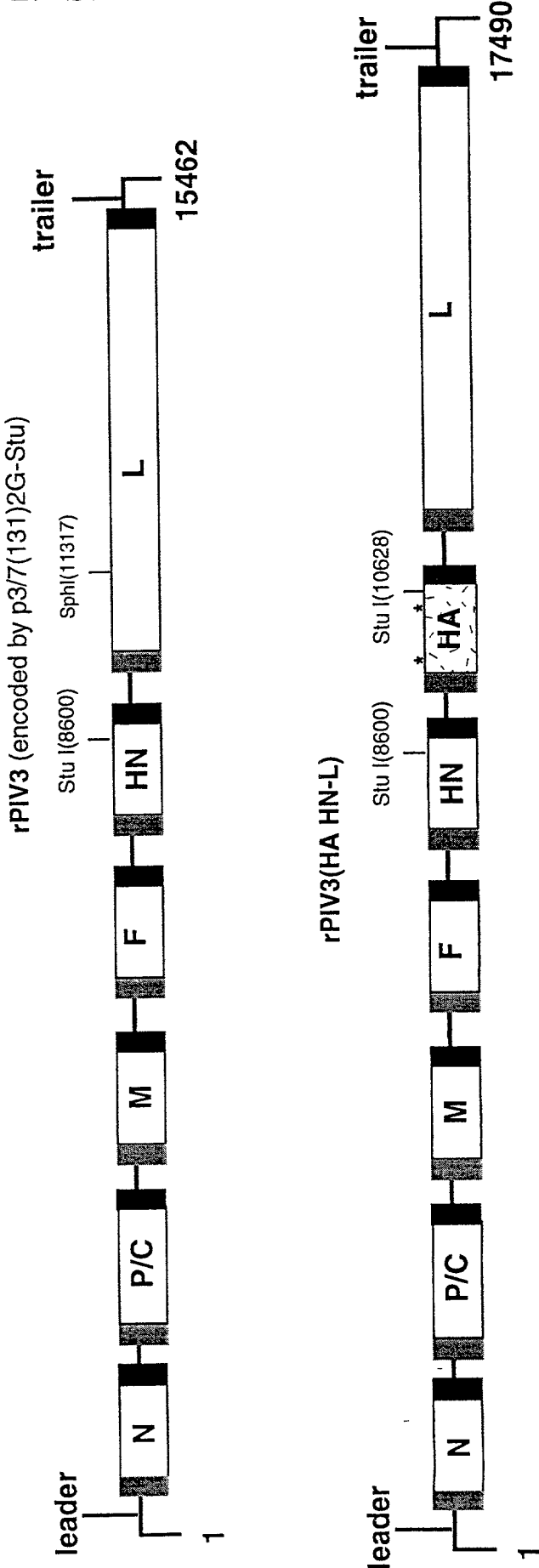


FIG. 1B



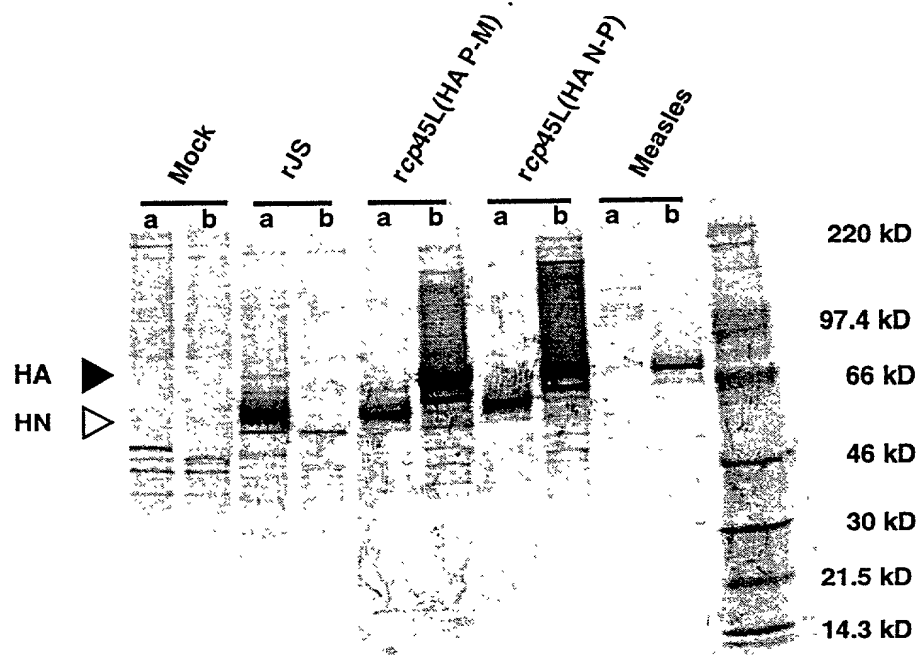


FIG. 2

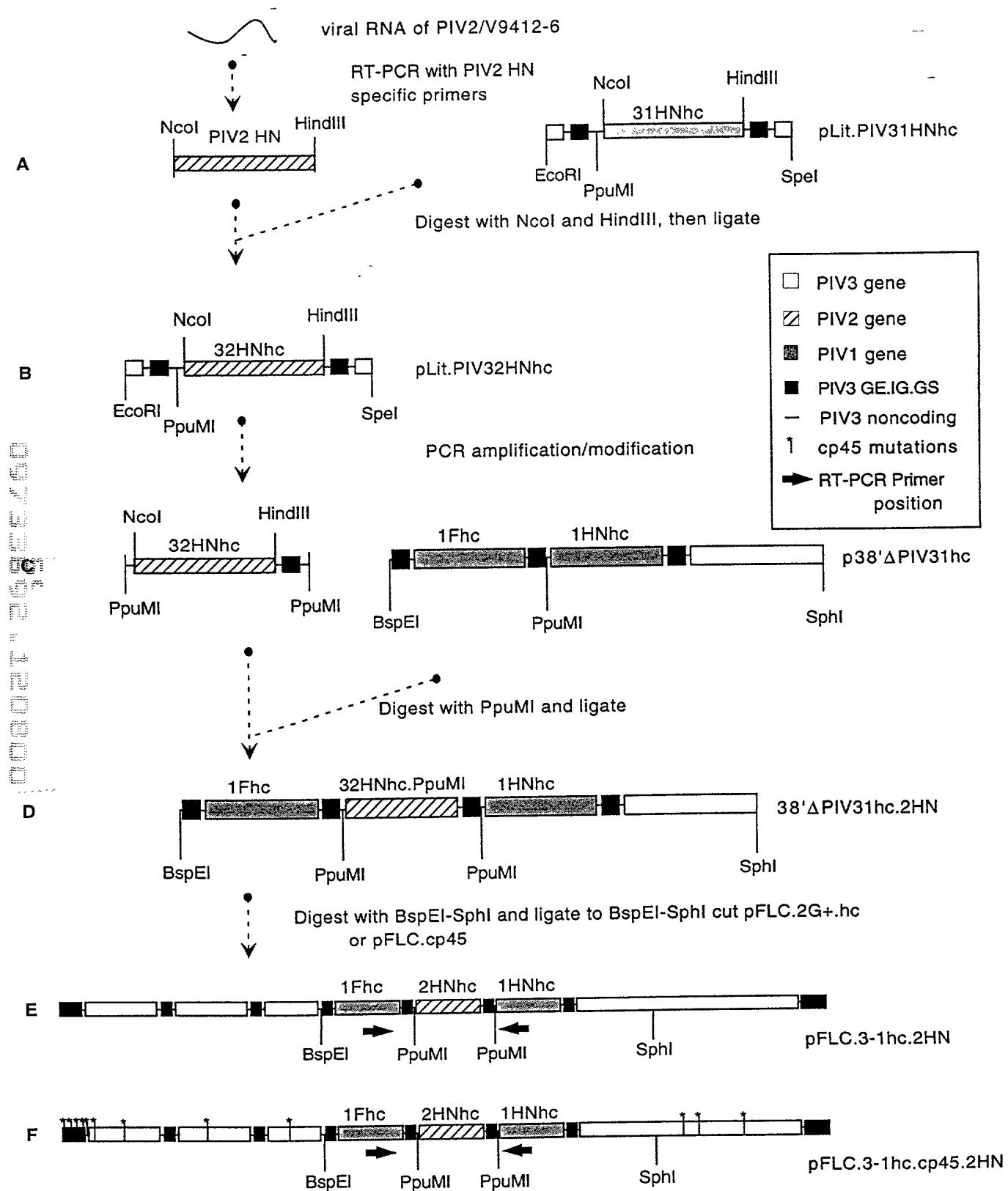


FIG. 3

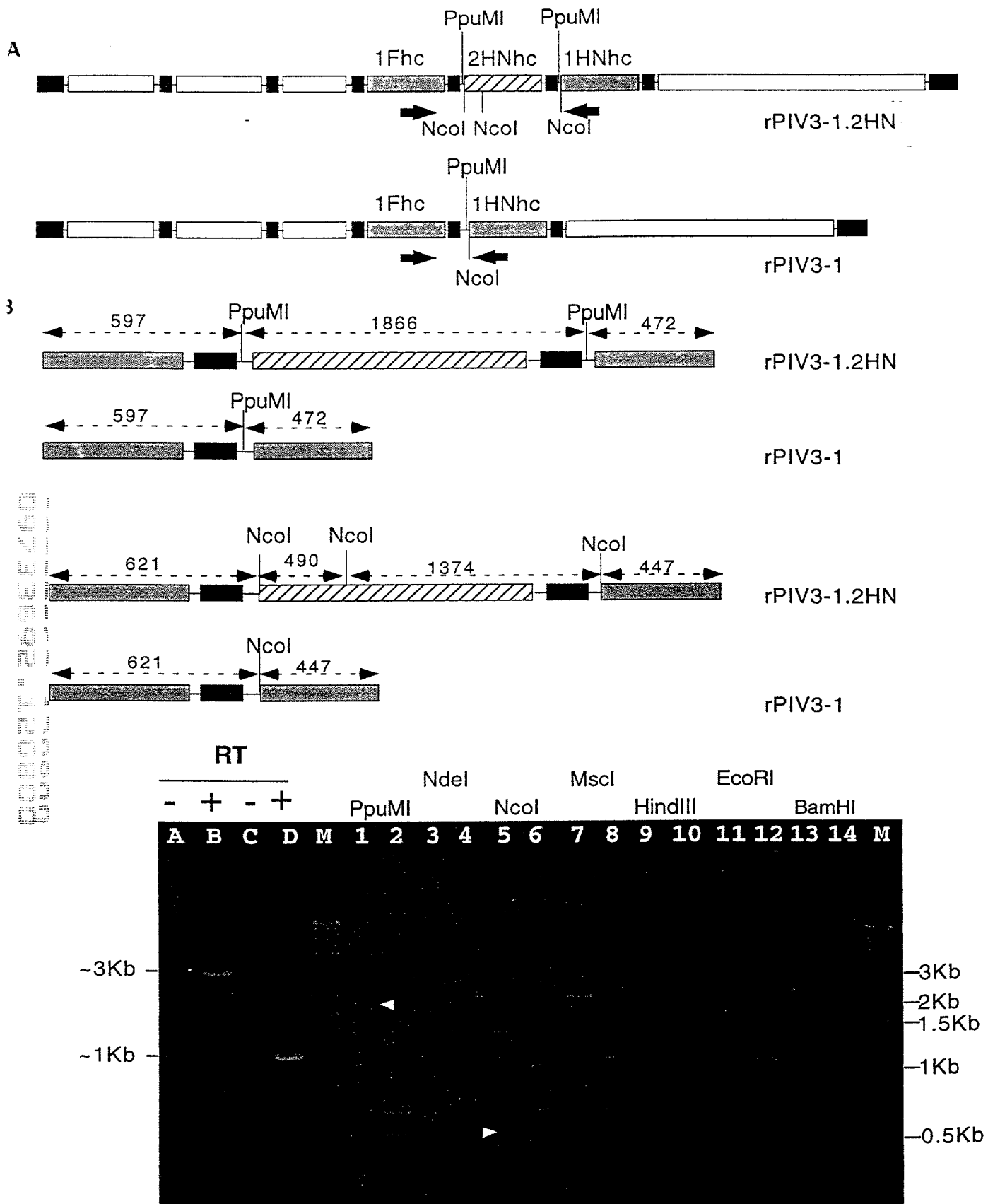


FIG. 4

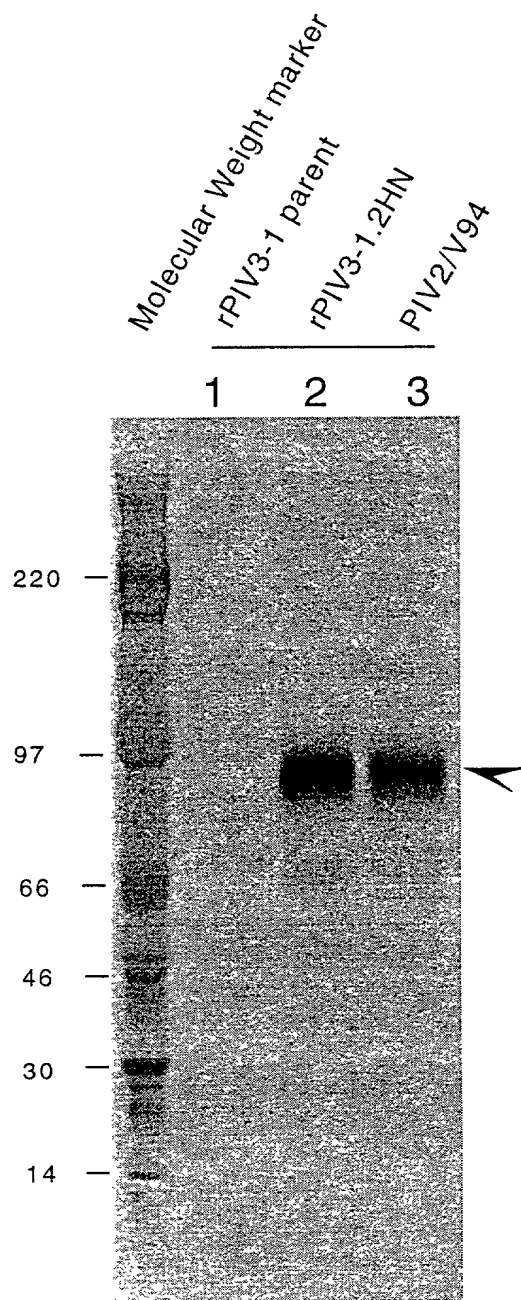


FIG. 5

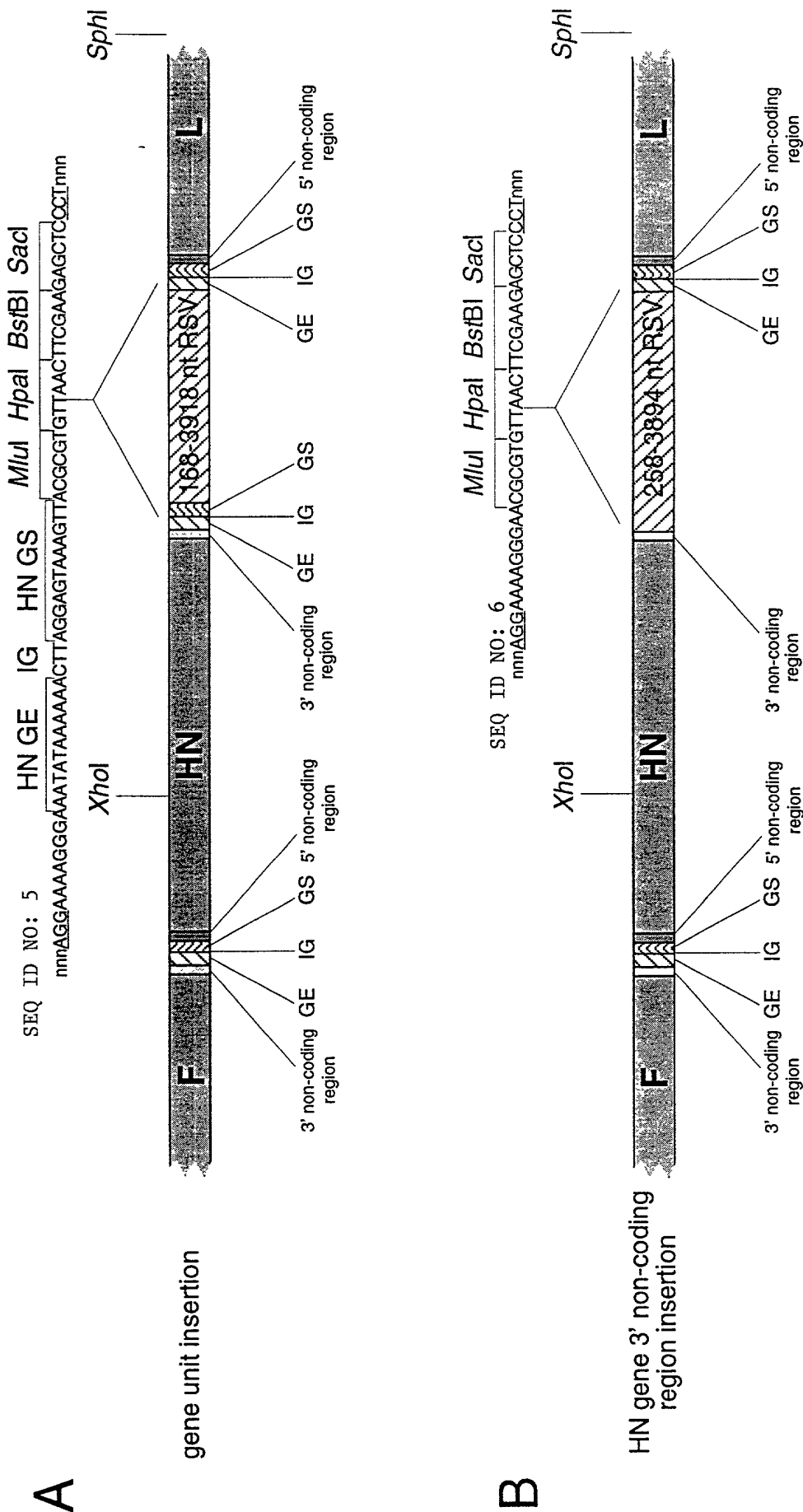


FIG. 6

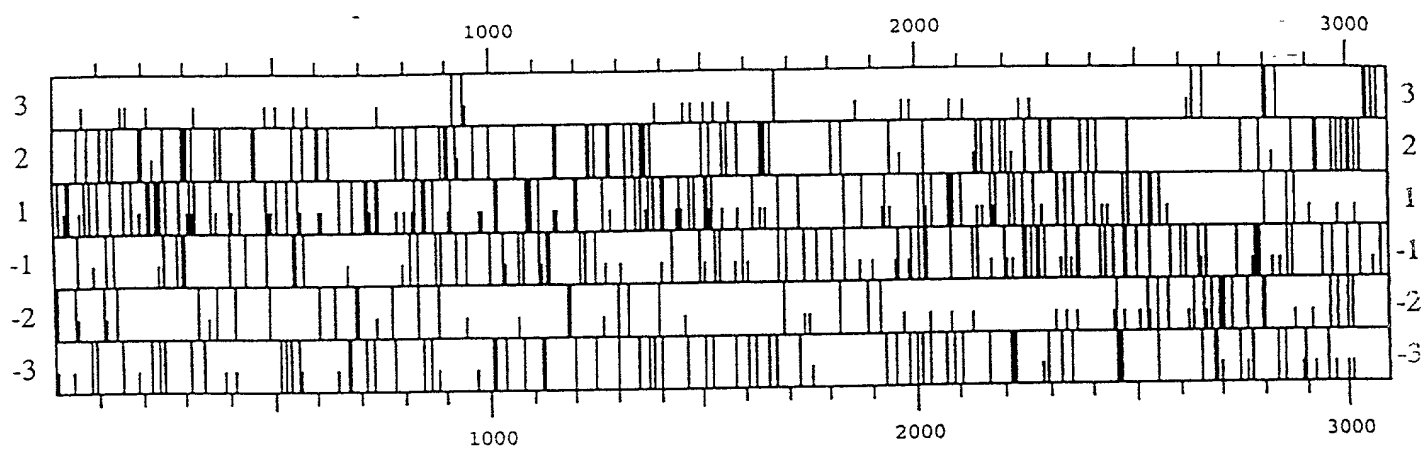
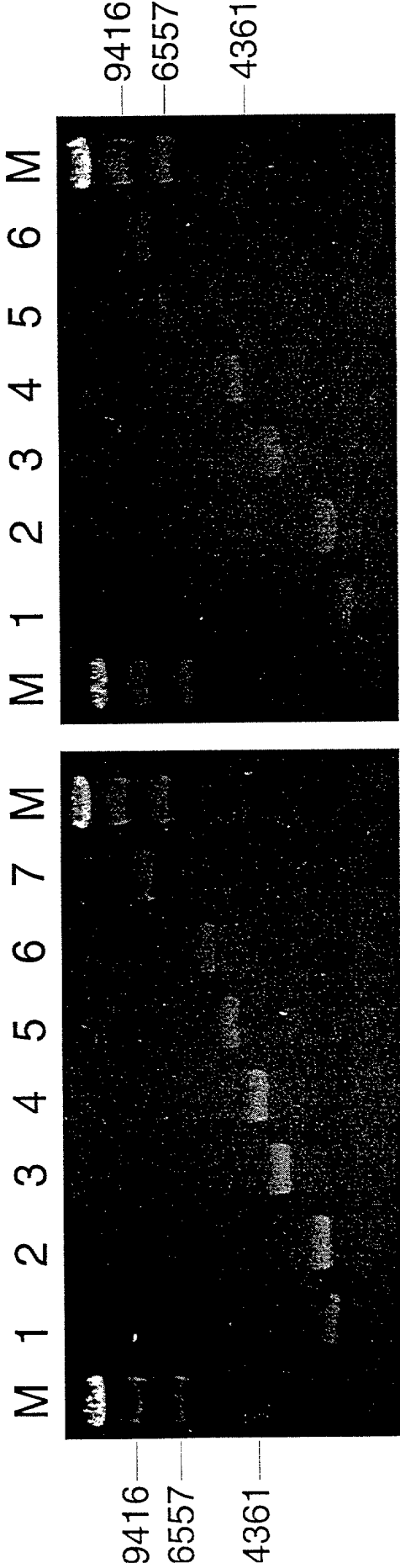


FIG. 7

A



B

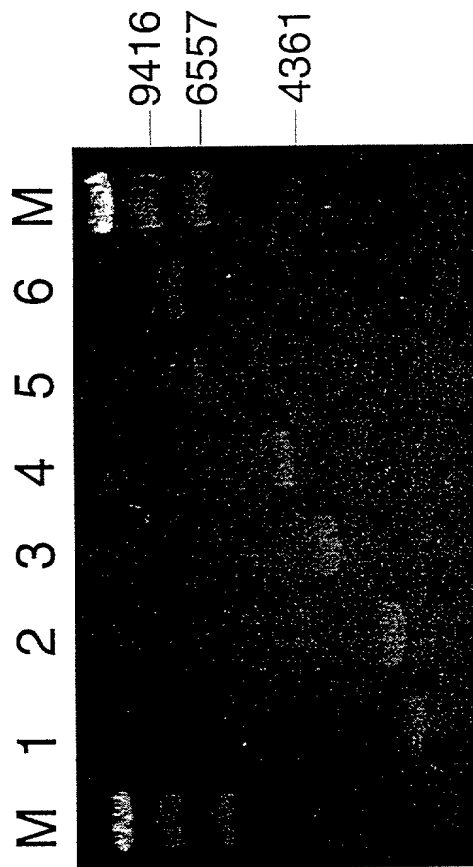


FIG. 8

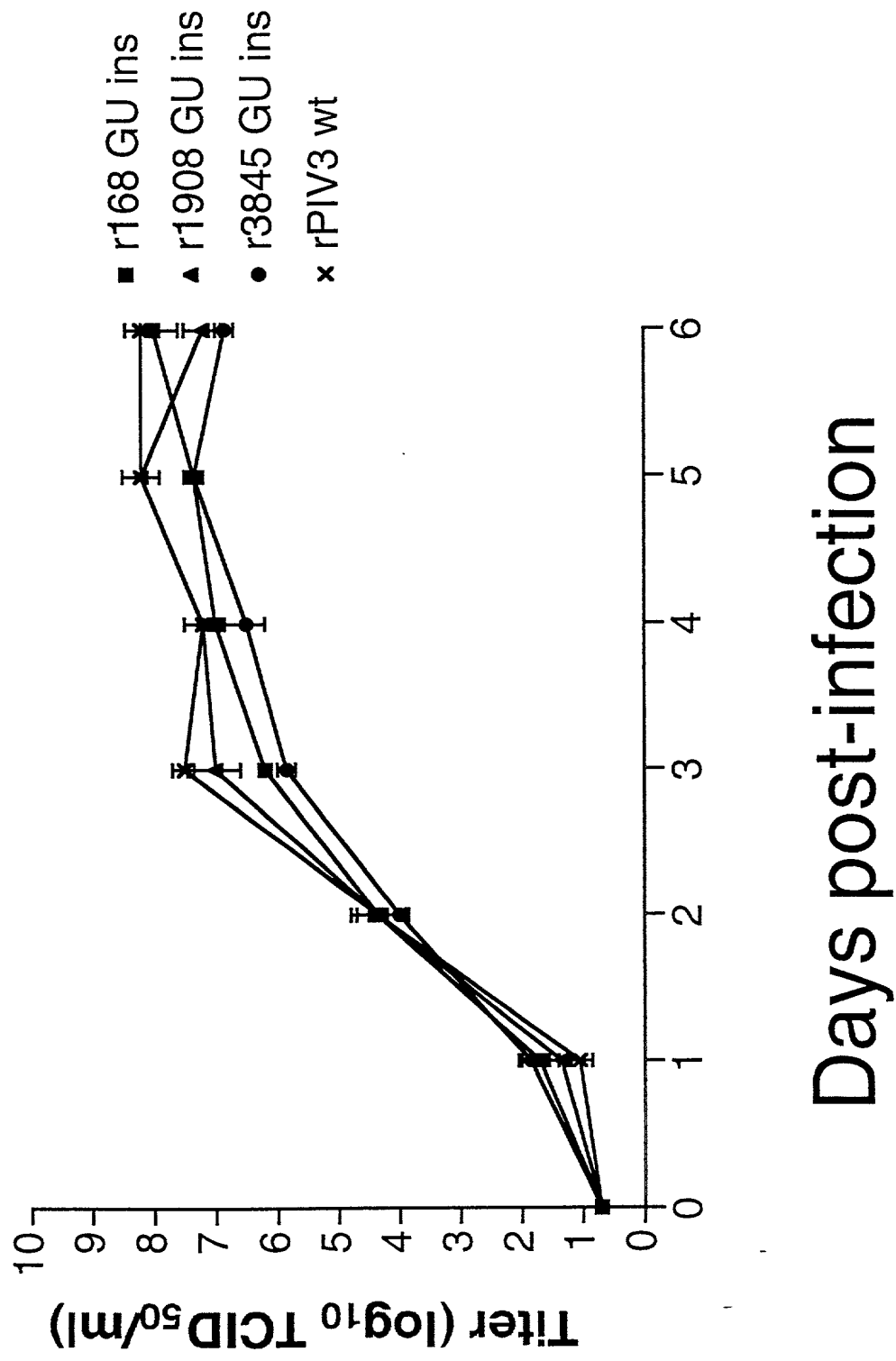


FIG. 9A

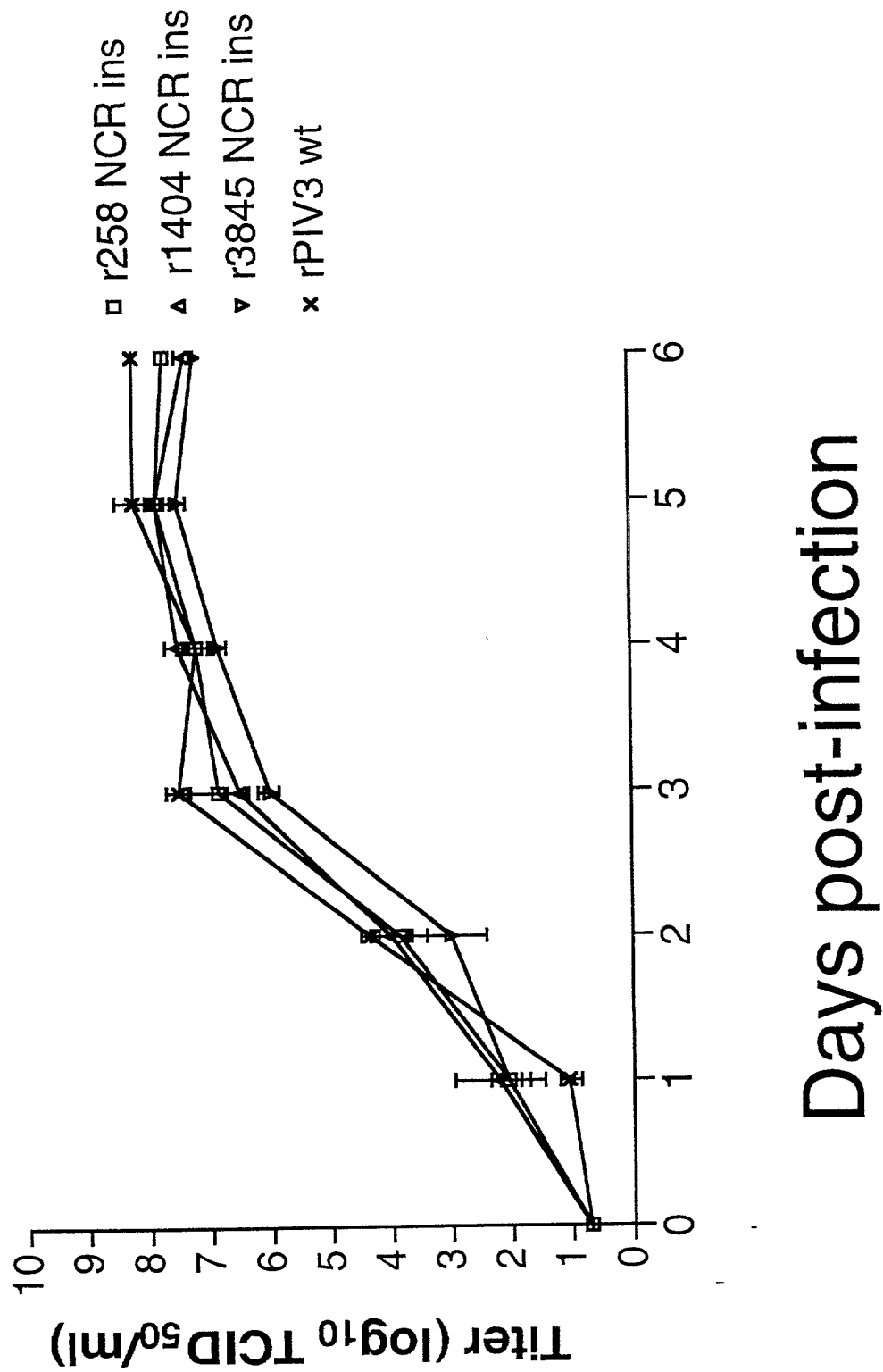


FIG. 9B

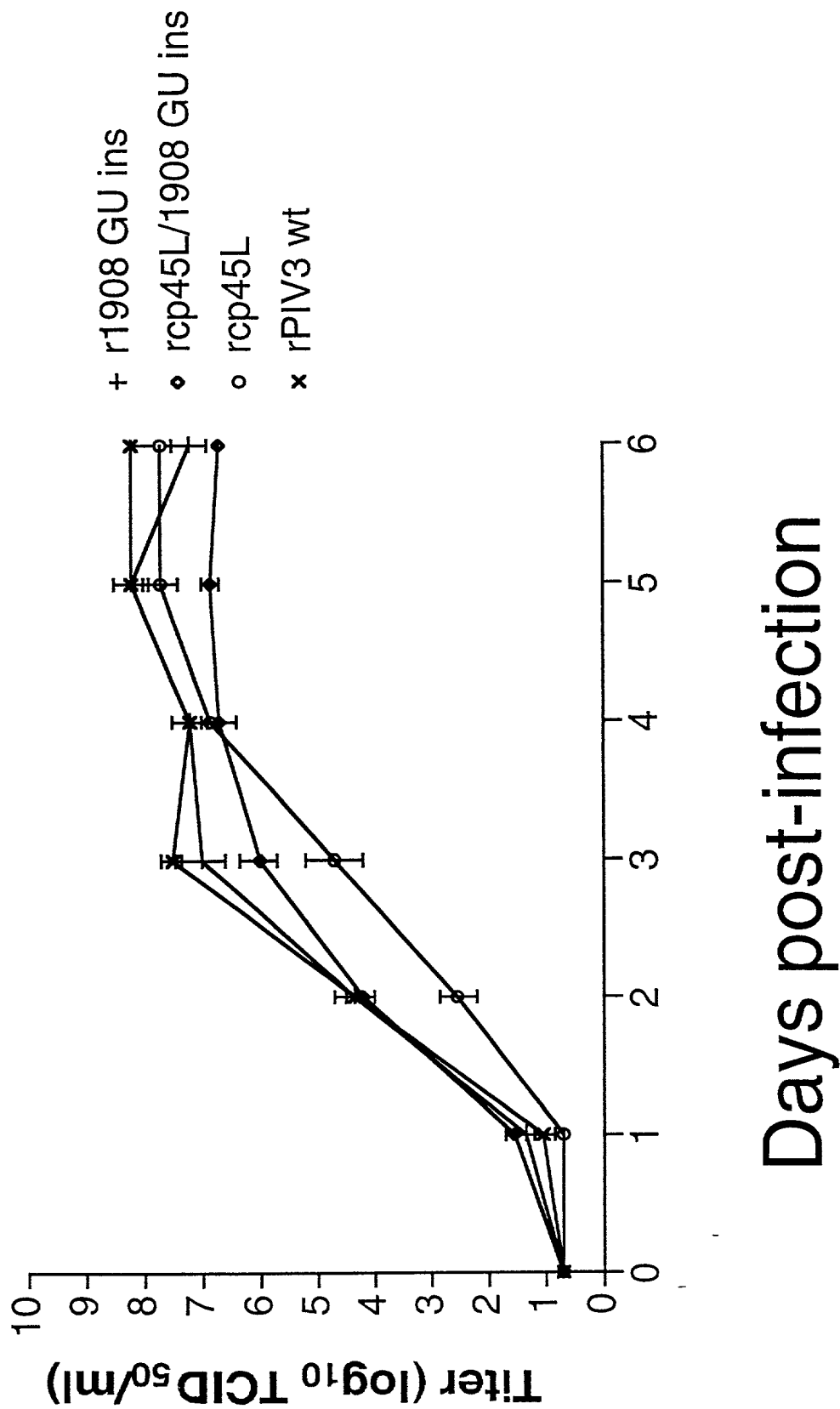


FIG. 9C

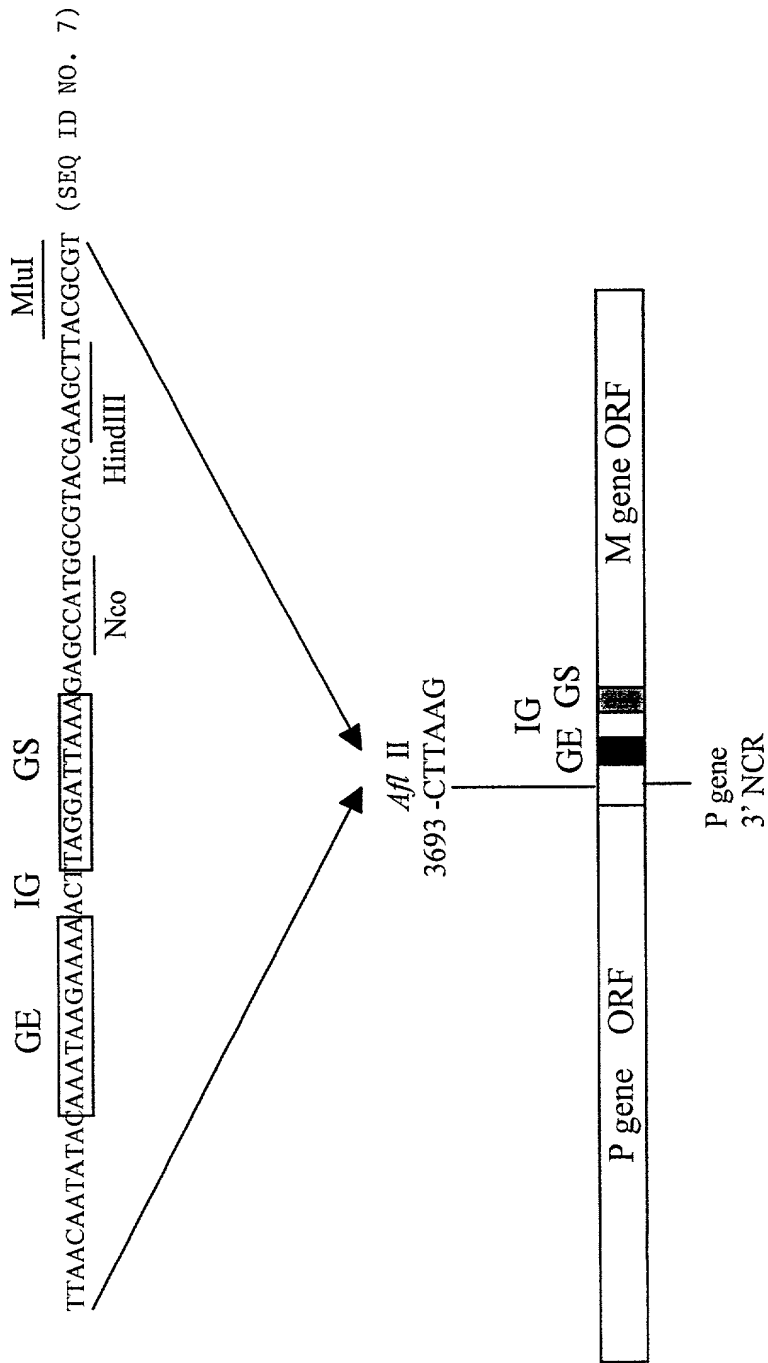


FIG. 10

	Mean peak titer (log ₁₀ TCID ₅₀ /ml) ^a	Reduction in titer at 39°C (log ₁₀ TCID ₅₀ /ml) ^b
rHPIV3 wt	9.4	0.3
rHPIV3 1HN _{NP}	7.4	0.7
rHPIV3 1HN _{FM}	7.9	2.3
rHPIV3 2HN _{NP}	7.9	0.3
rHPIV3 2HN _{FM}	9.2	0.5
rHPIV3 1HN _{NP} 2HN _{FM}	8.5	0.8
rHPIV3 1HN _{NP} 2HN _{NP} HA _{HN} L	7.7	3.0
rHPIV3 1HN _{NP} 2HN _{NP} Δ3918GU _{HN} L	8.7	2.0

FIG. 11

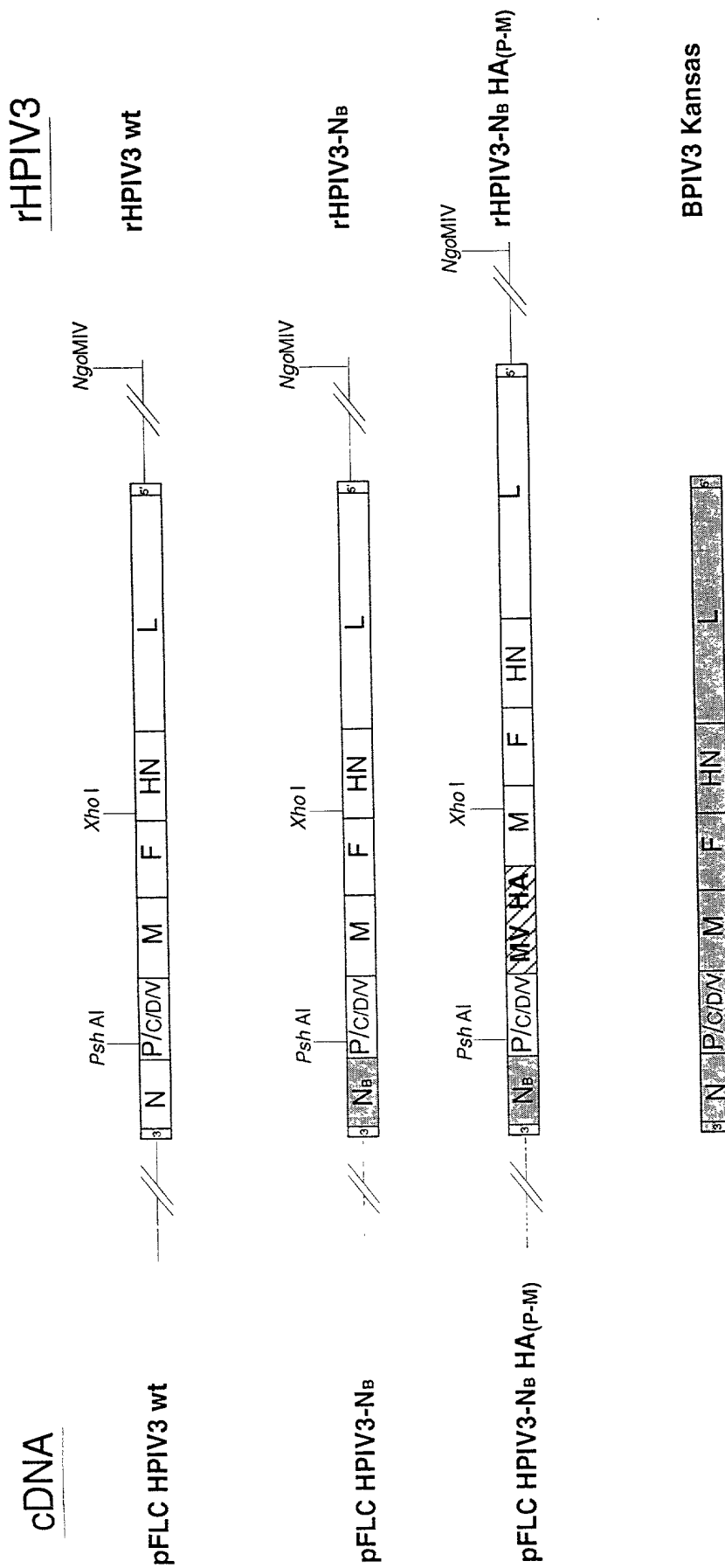


FIG. 12

Insertion of RSV G or F as an additional gene unit in a promoter-proximal position

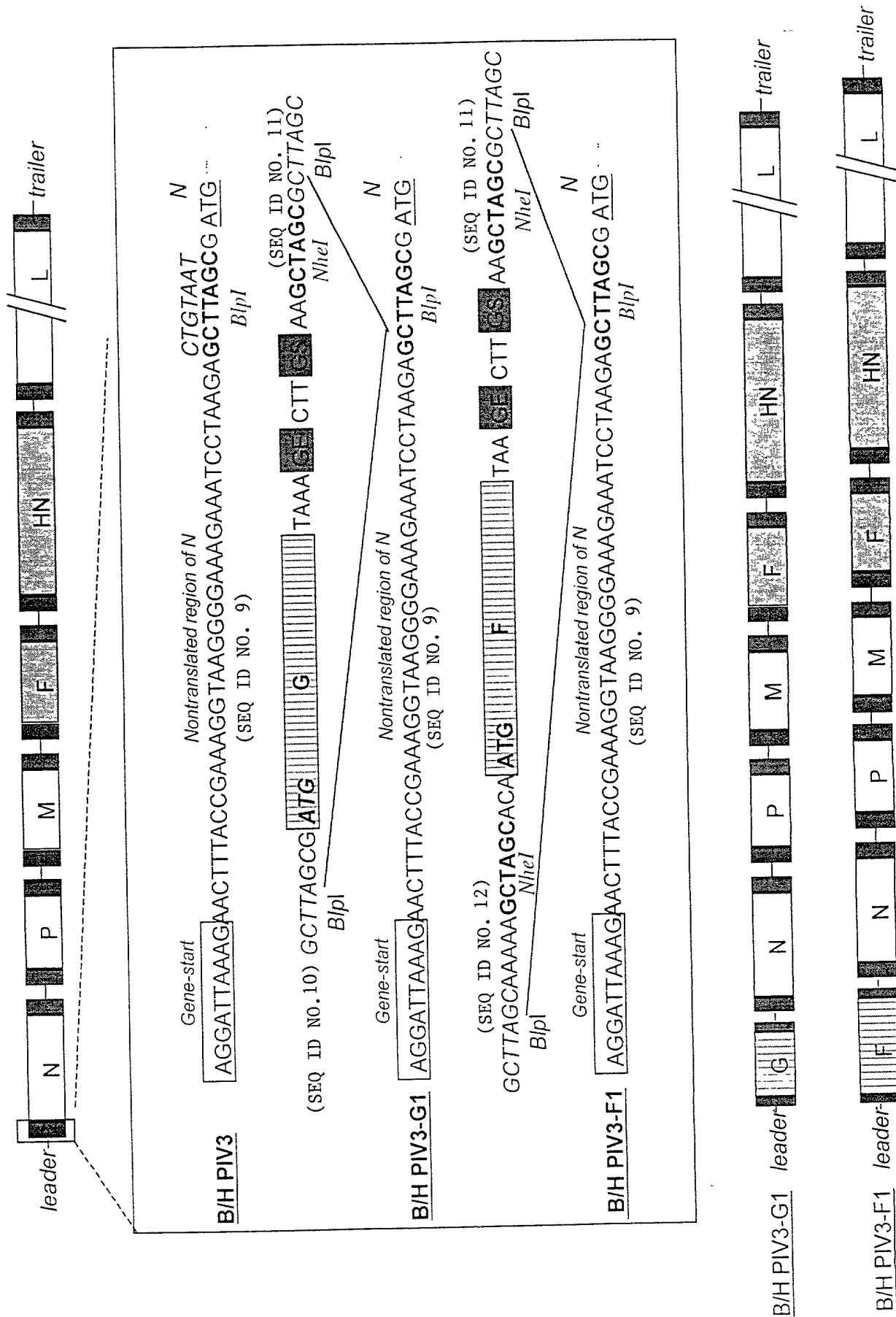


FIG. 13

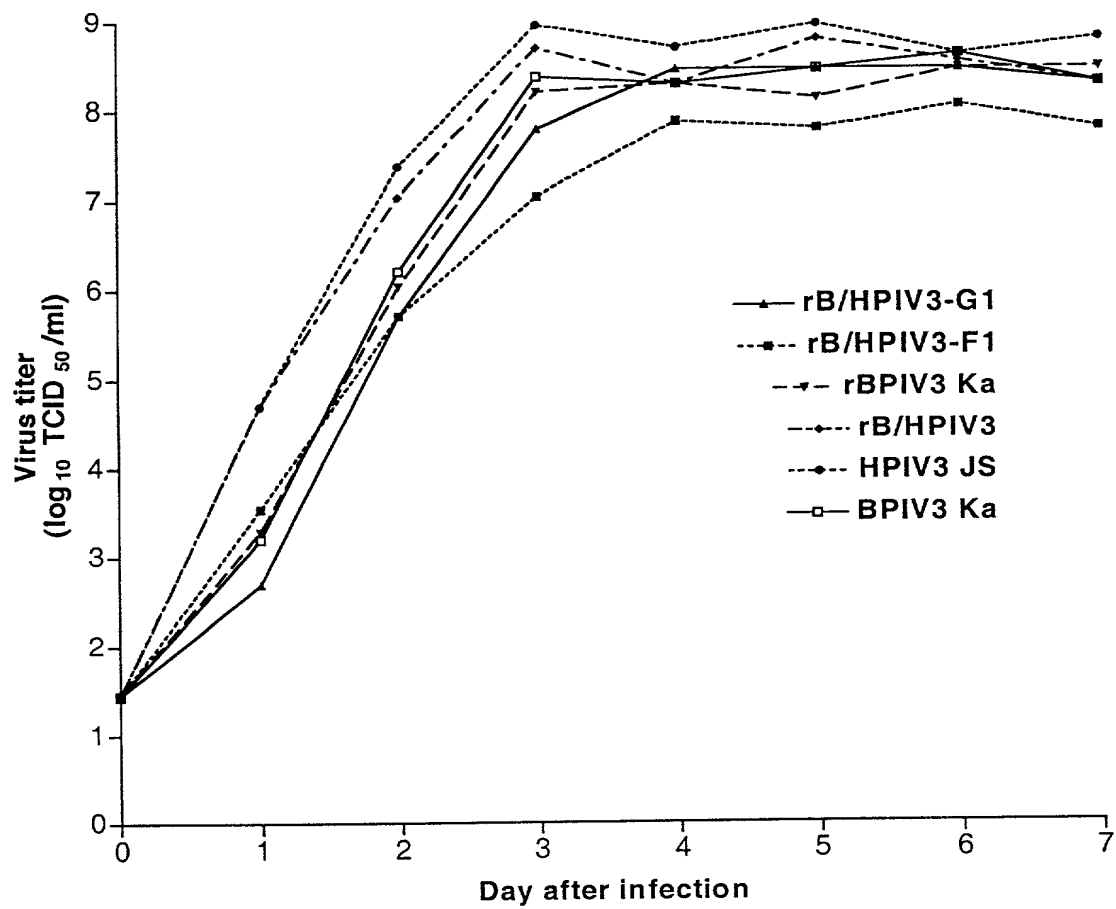
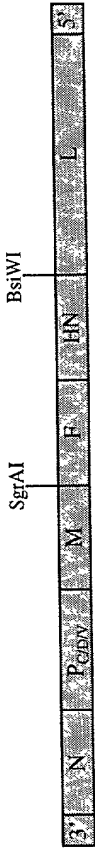


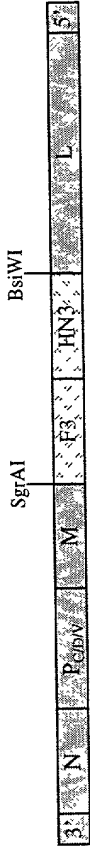
FIG. 14

Recombinant Bovine/Human PIV3.1 expressing HPIV2 F and HN from supernumerary genes

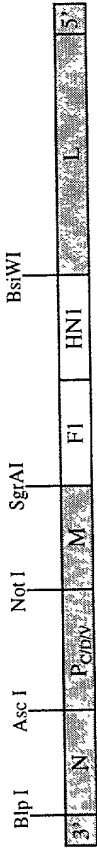
#1: rBPIV3



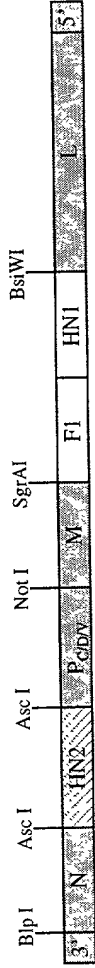
#2: rB/HPIV3



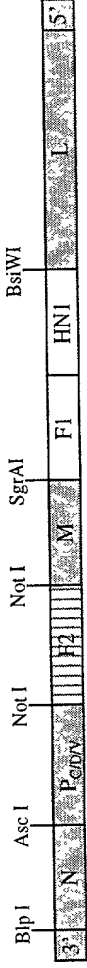
#3: rB/HPIV3.1



#4: rB/HPIV3.1-2HN



#5: rB/HPIV3.1-2F



#6: rB/HPIV3.1-2HN,2F

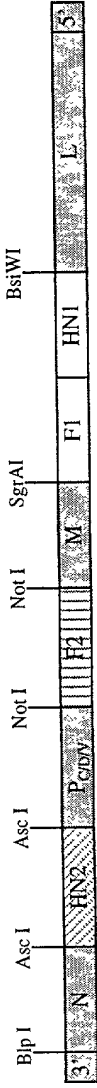


FIG. 15

cDNA

Virus

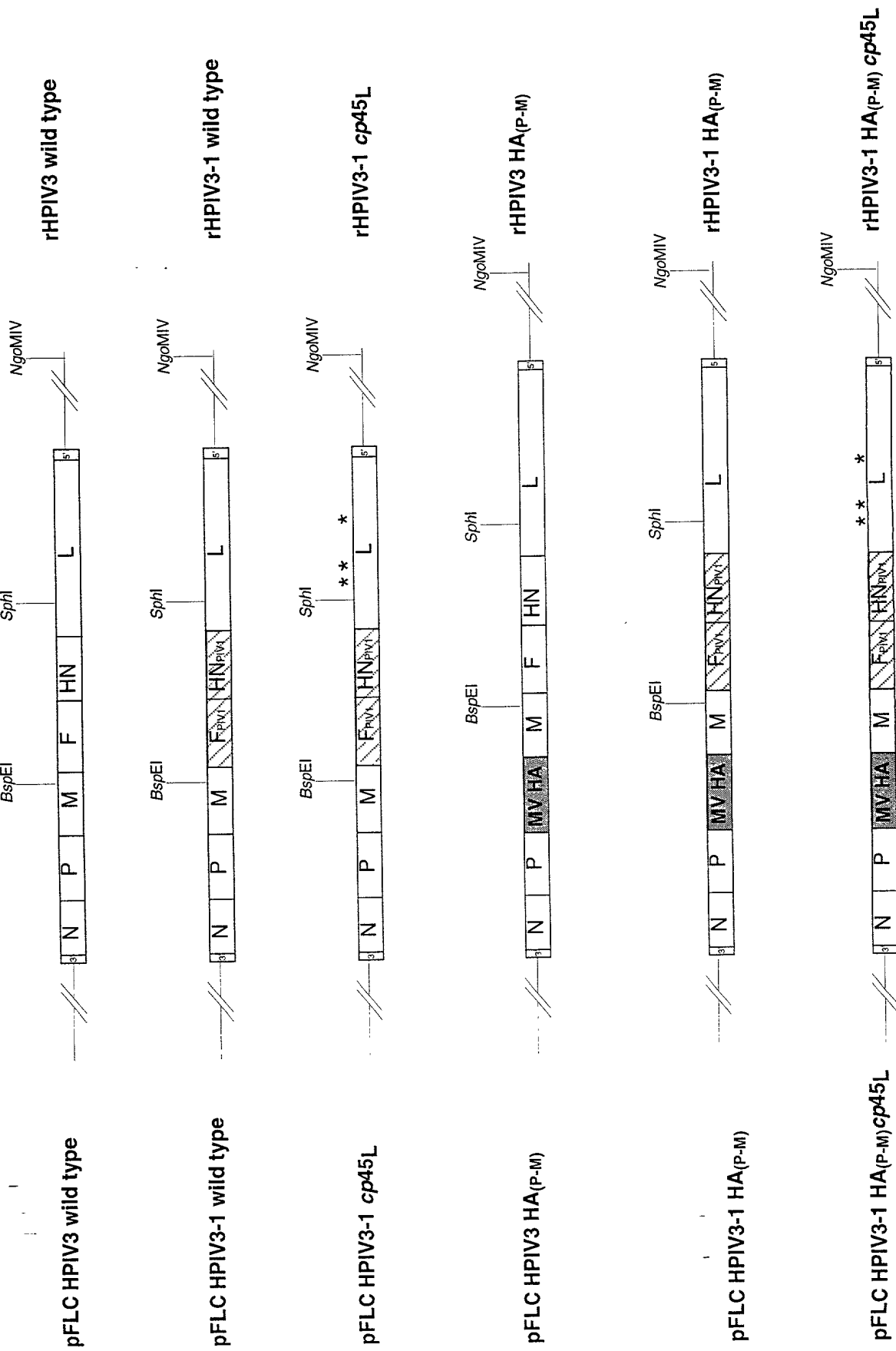


FIG. 16

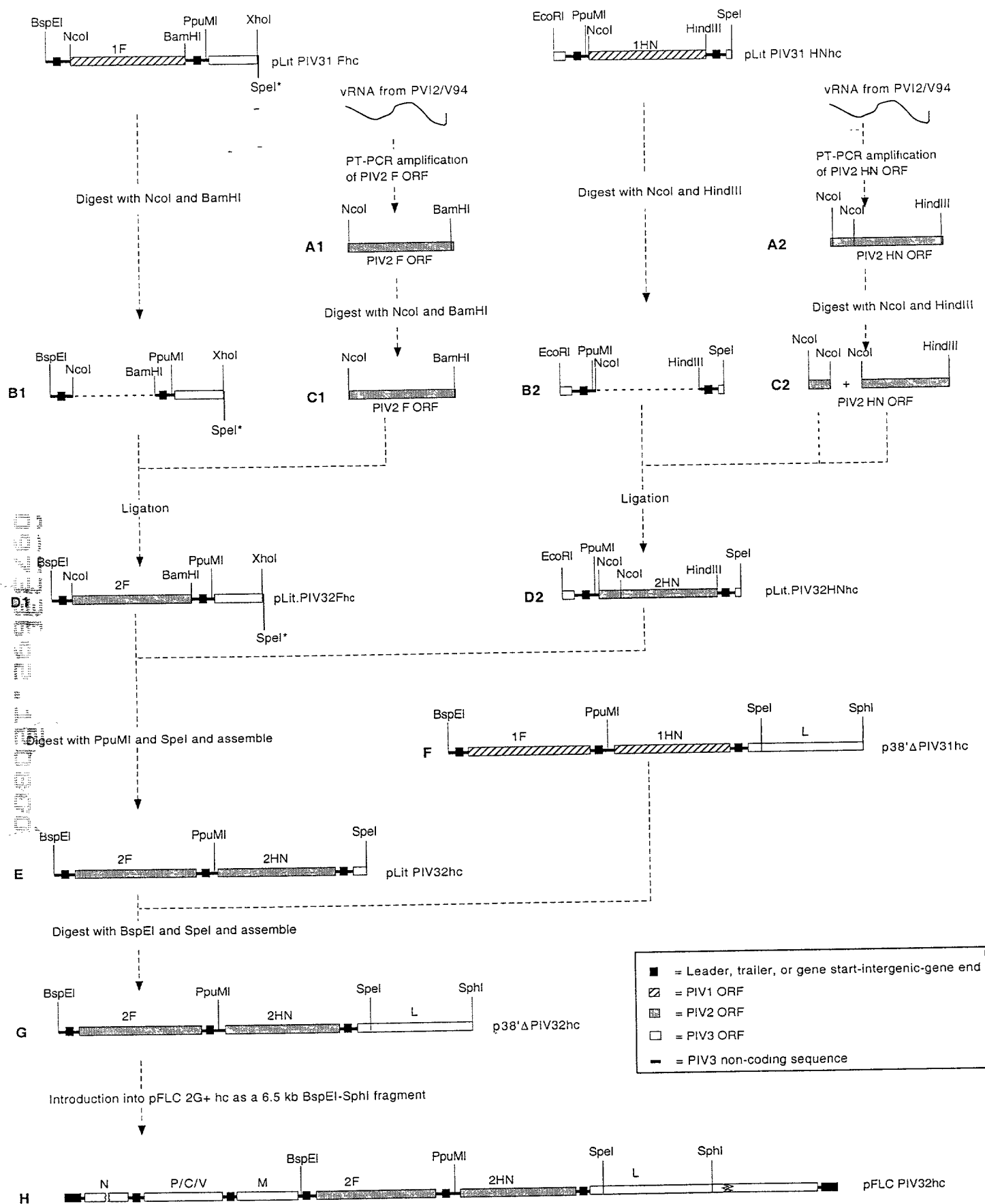


FIG. 17

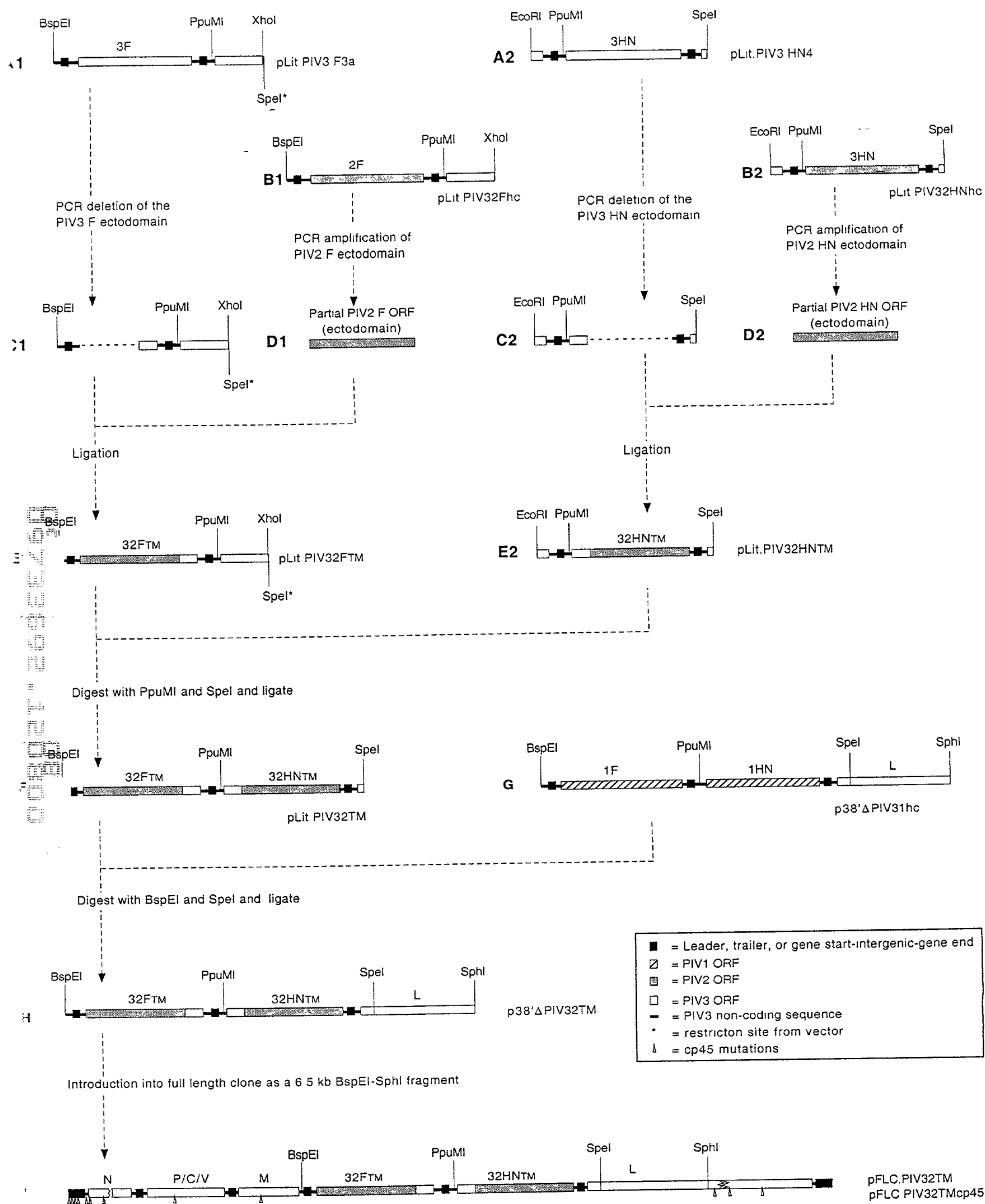


FIG. 18

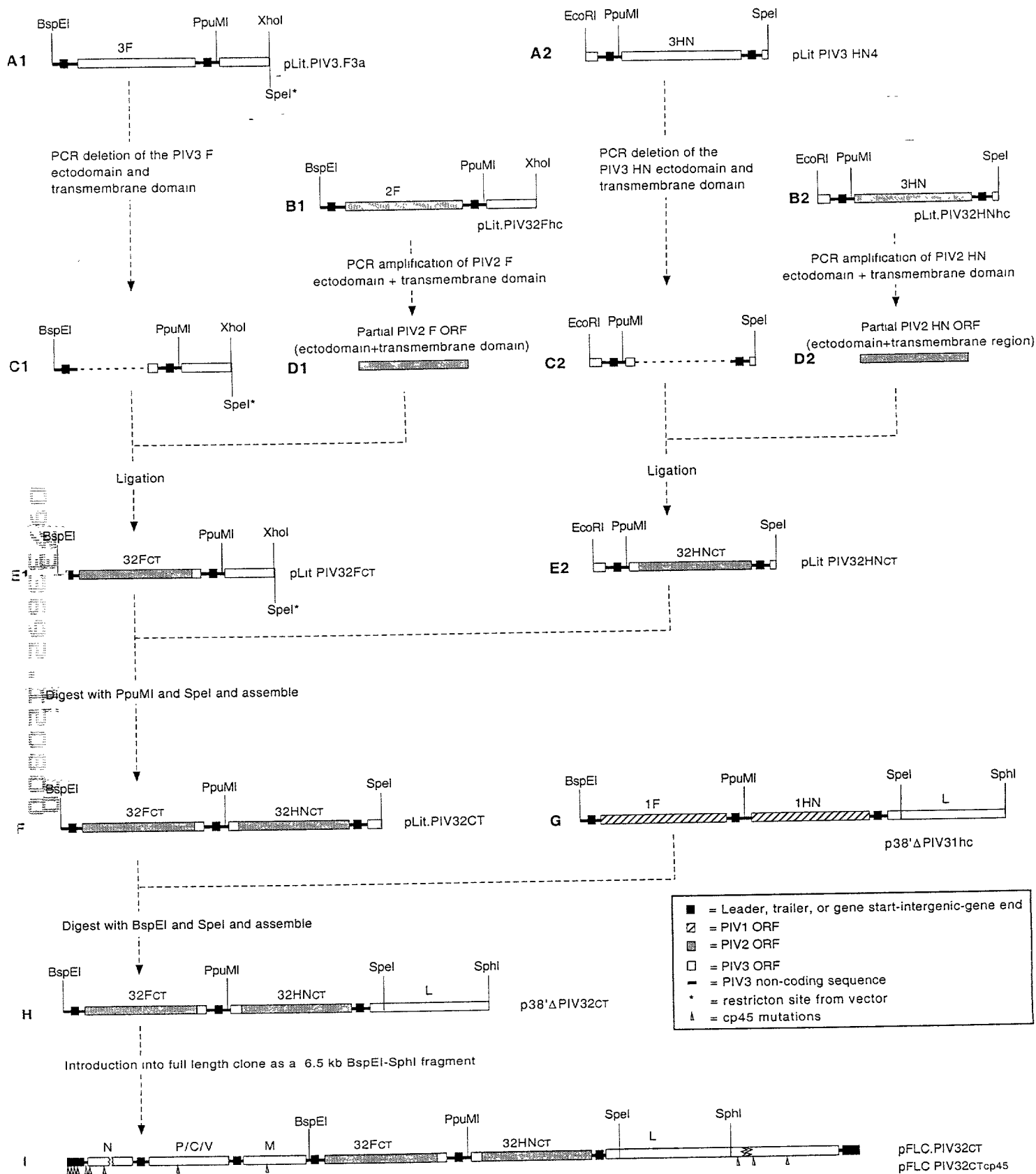
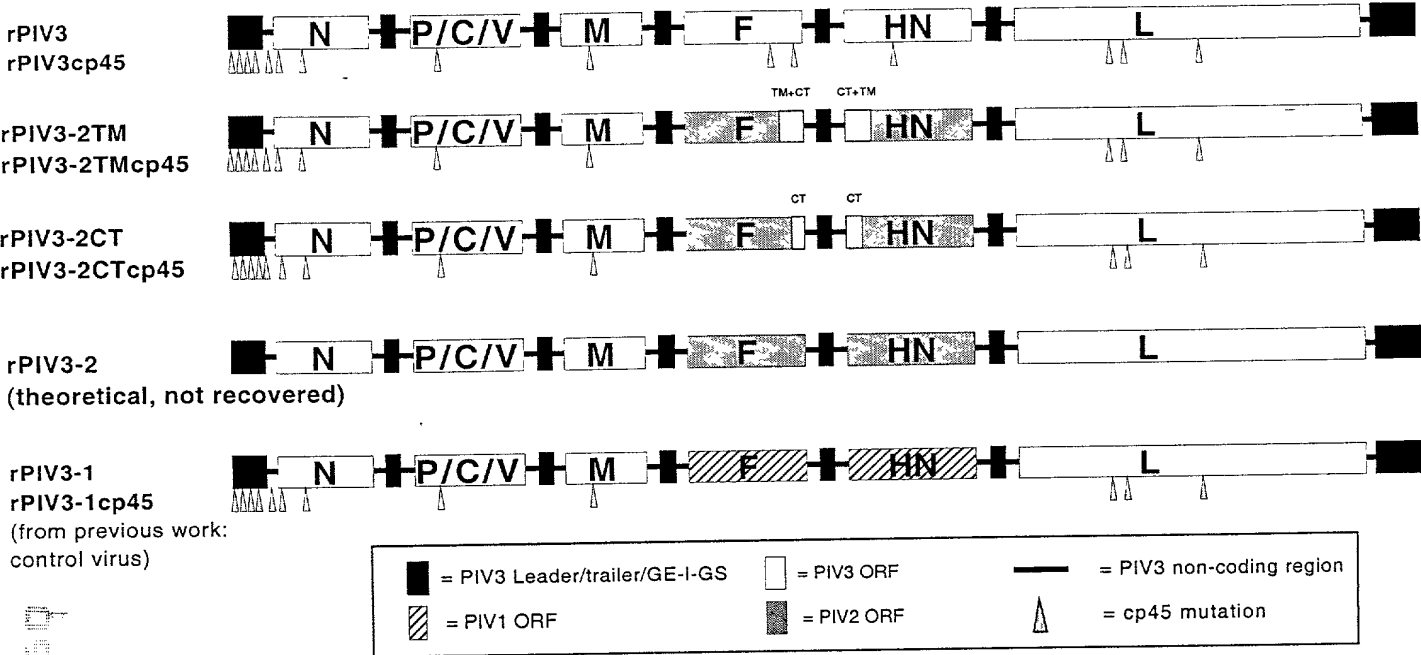
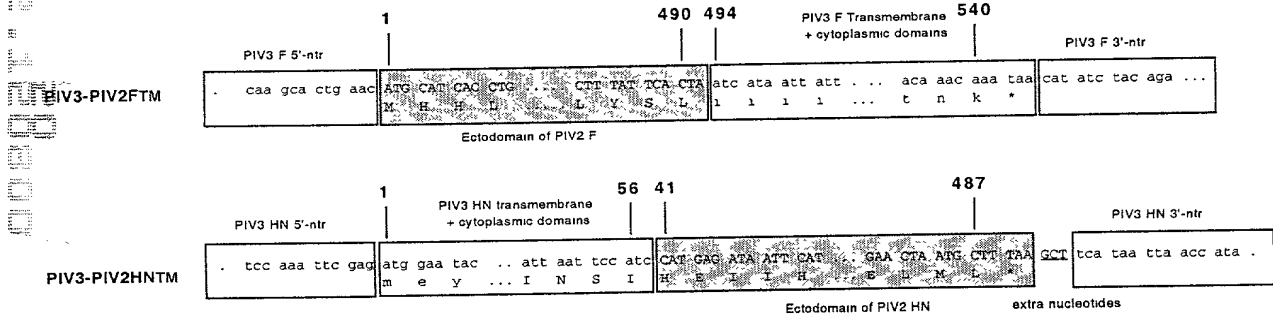


FIG. 19

A. Genetic structures of PIV3-2 chimeric viruses compared with rPIV3 parent and rPIV3-1



B. Chimeric PIV3-2 F and HN constructs with transmembrane and cytoplasmic domains derived from PIV3 F and HN



C. Chimeric PIV3-2 F and HN constructs with cytoplasmic domain derived from PIV3 F and HN

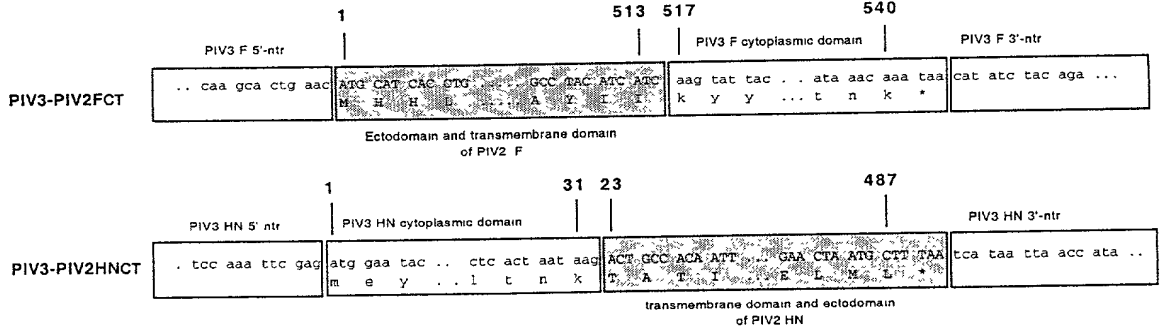


FIG. 20

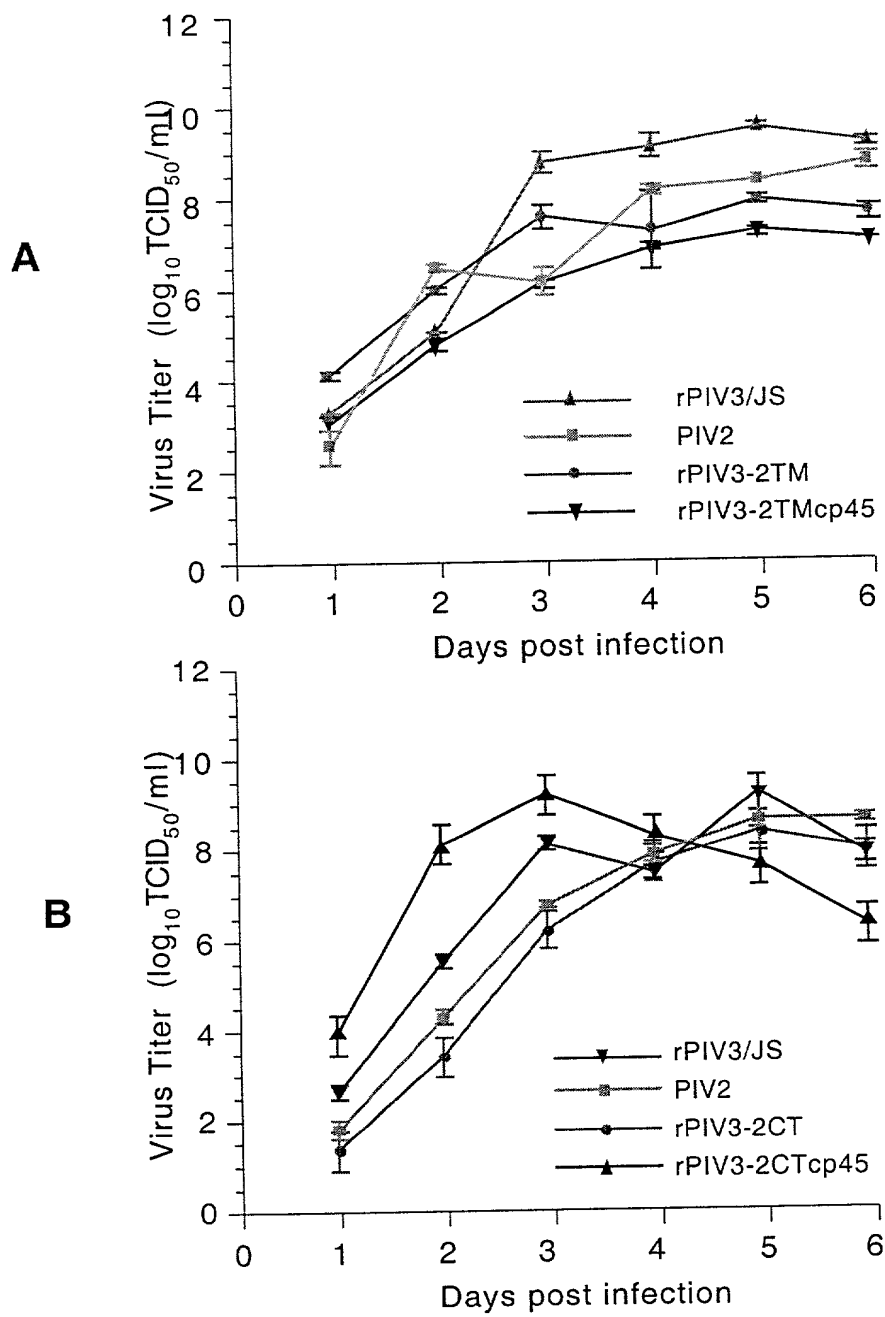


FIG. 21